

**IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

FREDDIE ADAMS, et al.

Plaintiffs,

vs.

BRG SPORTS, INC, et al.

Defendants.

CASE NO: 1:17-CV-08972-MFK

MASTER LONG-FORM COMPLAINT

COME NOW Plaintiffs to file this Master Long-Form Complaint against the Defendants BRG Sports, Inc. (“BRG”) and Riddell, Inc., (collectively “Riddell” or “Defendants”) and respectfully state:

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I.
OVERVIEW OF THE ACTION

A. Introduction and Case Overview

1. Riddell is the world's largest football helmet manufacturer, who recently touted:

THE GAME OF THE FUTURE WILL BE WON WITH THE BRAIN. AND THE HELMET, THE SPACE TO WHICH **WE HOLD THE RIGHTFUL OWNERSHIP**, IS THE HOME OF THE BRAIN. THAT SPACE MOST REPRESENTS THE FUTURE OF THE GAME.¹

2. Plaintiffs are former high school football players now suffering from brain and neurocognitive injuries caused by blows to the head sustained while wearing Riddell helmets while playing football.

3. Riddell betrayed their self-declared status as protector of these Plaintiffs' brains and well-being, when they knowingly and negligently developed, designed, tested, marketed, promoted, advertised, distributed and sold dangerous and defective football helmets that lacked critical and accurate safety information relating to the products, and failed to contain effective or accurate warning labels.

4. Safer alternative designs for helmets worn by Plaintiffs were available and known to Riddell since at least the 1970s. As a direct result of Riddell's wrongful acts and omissions, Plaintiffs now suffer from permanent, long-term brain injuries, with ever-worsening symptoms stemming from these injuries.

5. This lawsuit seeks to recover damages for present injuries sustained by the Plaintiffs as the direct and proximate result of the negligent and wrongful misconduct of Riddell in connection with the development, design, promotion, marketing, and sale of Riddell football helmets to Plaintiffs.

6. Riddell failed to disclose and warn that the helmets they marketed and sold did not perform in the manner they claimed they could and would—namely that these Riddell helmets would keep their customers safe if used in accordance with the limited instructions

¹ <http://www.riddell.com/history> (full quote removed as of February 2018—after his lawsuit filed) (last visited 5/4/18) (emphasis added).

provided. Riddell specifically represented their helmets would protect players from head trauma, repetitive head impacts, and after 2002, even concussions. In reality, Riddell knew these representations were false, and failed to take effective action to protect Plaintiffs or inform them of the true risks and dangers associated with concussions, brain injuries, and repetitive brain trauma—all of which were known or should have been known to Riddell while each Plaintiff played football wearing Riddell helmets.

B. Riddell’s history.

7. For decades, Riddell designed, manufactured, sold, and distributed athletic equipment, especially football helmets to high schools for use by high school players throughout the United States.

8. Riddell claims they are “the premier designer and developer of protective sports equipment” and touts that Riddell was founded in 1929 as a company “dedicated to innovation, protection and performance” of their customers.² Riddell claims that their foray into football helmet manufacturing beginning in 1939 was a “wipe-the-slate-clean, make-a-difference moment” in helmet technology.³ Riddell solidified their role as the lead helmet designer and producer when they “created one of the strongest branding placements in all sports for all to see every Saturday, Sunday and Monday” by placing the Riddell brand name “between the screws” of football helmets they marketed to players that would be seen on television.⁴

9. Recognizing that football over the past several decades can only be described as “BIGGER, FASTER, STRONGER,” Defendants placed on themselves a duty to protect the players buying and wearing their products, claiming that in light of the speed of the modern game, “Riddell is the pioneer of *innovating for the good of the player*.”⁵ Riddell has claimed and still claims themselves as the “recognized leader in helmet technology and innovation for athletes at all levels of football.”⁶ Plaintiffs wore one or more Riddell helmets while playing

² <http://www.riddell.com/history> (last visited 5/2/18).

³ *Id.*

⁴ *Id.*

⁵ *Id.* (emphasis added).

⁶ *Id.*

and/or practicing during their football careers, and wore the Riddell helmets when they suffered repetitive concussive and sub-concussive blows.

10. It is (and was) vital to the safety of the players that Riddell act reasonably, through research, studies, testing and other means, to help identify the risks of serious injuries associated with playing football while wearing Riddell helmets; to keep the teams and players that use their helmets informed of the risks; and to take reasonable steps based upon their findings to protect and educate players who rely on their helmets to protect them.

11. Football players like Plaintiffs need safety equipment that performs in the manner that it is represented to perform. In instances where there are inherent dangers, or where the safety equipment does not provide sufficient protection from these inherent dangers, the equipment manufacturers and sellers must provide clear, easily understandable, and easily seen warnings.

C. Riddell's misleading marketing and labelling of fundamentally unsafe products.

12. Beginning in 1983, warning labels first were placed onto the backs of Riddell's helmets. Prior to that time, on information and belief, Riddell failed to provide any warning labels or information whatsoever to their customers.

13. From 1983 until the late-1990s, the Riddell helmets bore roughly postage-stamp-sized warnings, containing the following text, with no express mention of concussions:

Do not use this helmet to strike an opponent. Such an action is against football rules and may cause severe brain or neck injury. Playing the game of football in itself can cause injury, and no helmet can prevent all such injuries.⁷

14. This warning was inherently misleading and could be interpreted by a reasonable consumer that so long as one did not use the helmet to strike an opponent or in a manner was against "football rules," the helmet was safe and would protect the player from head injuries.

⁷ This warning implied that the Riddell helmet could prevent many such injuries, including concussions. Since approximately 2003, Riddell's chief competitor in the football helmet market, Schutt Sports, offered on its labels the following warning: "No helmet system can protect you from serious brain and/or neck injuries including paralysis or death. To avoid these risks, do not engage in the sport of football." See Belson, K., "Warning Labels on Helmets Combat Injury and Liability," New York Times (Aug. 4, 2013).

15. Later warning labels were similarly misleading and failed to effectively disclose the long-term dangers these Players would be exposed to while wearing the Riddell helmets and using them for their intended purpose.

16. Later, Riddell claimed they made “the only advancement in helmet technology” and specifically referenced concussion reduction capabilities. Hoping to profit from the nascent concern over concussions and head injuries, which Riddell and others had fought vigorously to hide for years, Riddell claimed that they had created a football helmet that would provide a player with a *safer* helmet that would protect the player from concussions as compared with other helmets available on the market during the same time.

17. Riddell claimed that the “Riddell Revolution Helmet” was proven to be 31% safer than other helmets available at the time. Riddell knew or had reason to know that these representations about the increased protection offered by Riddell’s Revolution were false, and after a Federal Trade Commission investigation, were forced to stop making that marketing claim.⁸ Riddell knew or had reason to know that their representations would never be questioned by the community of consumers and the players who wore these helmets, because the community and the players relied upon and trusted Riddell.

18. The Revolution line of helmets also contain common inherent design defects, including:

- a. a defective rear and/or side padding liner system that fails to incorporate newer, safer and better energy absorbing materials such as air-filled chambers and/or thermoplastic polyurethane (“TPU”) padding that have been shown to substantially reduce the forces transmitted to a player’s head from both linear and rotational impacts thereby mitigating the risk of injury i.e. concussions.
- b. defective padding that cannot absorb most football blows without distributing acceleration onto the head of the player.

⁸https://www.ftc.gov/sites/default/files/documents/closing_letters/riddell-sports-group-inc./130430riddellvillafrancoltr.pdf

- c. substandard foams in the front pad rather than available newer materials that perform better at attenuating energy by reducing force to the forehead.⁹

19. Nevertheless, Riddell marketed all of their helmets as safe and/or safer equipment that would protect the players, especially from concussions.

20. Riddell had superior knowledge to that of Plaintiffs of the risks that would come from wearing the Riddell helmets, beginning at the latest in the early 1970s and certainly both before and after the rollout of the 2002 Revolution helmets, based on Riddell's own studies and testing, yet Riddell failed in their duty to warn the athletes. Riddell's conduct constitutes negligence.

21. Riddell breached their duty to educate, protect and adequately warn football players in the face of long-standing and overwhelming evidence regarding the dangerous risks posed by repetitive head trauma known to Riddell.

22. Riddell has profited immensely their inactions, misrepresentations and falsehoods, all to the detriment of the Plaintiffs who relied upon them for accurate and truthful information concerning the safety of their products.

D. Plaintiffs suffer latent brain injuries caused by the bad acts of Riddell.

23. Each Plaintiff wore Riddell helmets at the times relevant to this suit (the dates they suffered concussive and sub-concussive blows to the head while playing football) and were injured while wearing Riddell helmets, though the scope and existence of the injuries was only recently discovered. Plaintiffs respectively played high school football at various high schools and at various times as indicated in prior individual complaints and in the Short-Form Complaints being filed on or before May 21, 2018.

24. The Plaintiffs each suffered brain injuries proximately caused by Riddell's negligence, failure to warn, design defects, and Riddell is strictly liable for Plaintiffs' injuries. For example and without limitation, had Riddell actually provided full, understandable, and effective warnings to Plaintiffs regarding the risks of long-term brain injuries while wearing

⁹ The proper selection of foam padding for the liner system is extremely important because players sustain the majority of impacts to the forehead area, which is also the thinnest layer between the skull and brain.

supposedly protective head gear (Riddell helmets), certain Plaintiffs would have avoided certain head contact they thought was safe, certain Plaintiffs would not have chosen to continue playing football, and certain Plaintiffs may have chosen to wear a safer and better designed helmet.

II.

JURISDICTION AND VENUE

25. This Court has diversity jurisdiction pursuant to 28 U.S.C. § 1332 as each Plaintiff is a citizen and resident of a different state than each Defendant. The amount in controversy exceeds \$75,000 as to each named Plaintiff.

26. Venue is proper in this district pursuant to 28 U.S.C. § 1391(b)(1), (2) and 1391(c) as the Defendants are deemed to reside in this judicial district because they are subject to personal jurisdiction here; and a substantial part of the events and/or omissions giving rise to the claims emanated from activities within this jurisdiction and each Defendant conducts substantial business in this jurisdiction. Defendants have further agreed and consented to venue and jurisdiction before this Court.

III.

PARTIES

A. Plaintiffs.

27. Plaintiffs are former non-professional football players now suffering from brain and neurocognitive injuries caused by blows to the head sustained while wearing Riddell helmets while playing football. Allegations supporting the residency, the citizenship, exposures to repetitive head trauma, the years of play, the manifestation of latent disease, and damages of each individual Plaintiff will be set forth in the Short-Form Complaint Against Riddell. Each Plaintiff wore Riddell helmets at the times relevant to this suit and were injured while wearing Riddell helmets, though the scope and existence of the injuries was only recently discovered.

B. Defendants.

28. Defendant BRG Sports, Inc., formerly known as Riddell Sports Group, Inc. is a Delaware Corporation with its principal place of business in Illinois. Defendant BRG has answered and appeared before this Court, and may be served through its counsel. On information and belief, BRG acquired the assets and liabilities of Riddell Sports Group, Inc. and

other Riddell-related entities in the prior design and manufacture of Riddell helmets at issue in this lawsuit. On information and belief, BRG holds and/or has held and/or developed football-helmet patents and other intellectual property related to the technology employed in Riddell football helmets.

29. Defendant Riddell, Inc. is a corporation organized and existing under the laws of the State of Illinois and whose principal place of business is in Illinois. Riddell, Inc. is a wholly owned subsidiary of BRG Sports, Inc., and has answered this lawsuit and appeared before this Court, and may be served through its counsel.

30. Both Riddell, Inc. and BRG Sports, Inc. are involved in in the development, design, testing, marketing, advertising, distribution, and sale of the defective Riddell football helmets at issue.

31. At all times mentioned herein, each Defendant was an agent, representative, and/or affiliate of every other Defendant, and in doing the things alleged in the Plaintiffs' Complaint, each Defendant was acting within the course and scope of such agency, representation, and/or affiliation and was acting with the consent, permission and authorization of the other Defendants. All actions of each Defendant were ratified, approved, or supported by the other Defendant or their respective directors, officers and/or managing agents, as appropriate for the particular time period alleged herein.

IV. FACTUAL BACKGROUND

A. Overview of concussions and sub-concussive hits.

1. Concussions and what they cause.

32. The brain is made of soft tissue and is cushioned by fluid. It is encased in the hard, protective skull. When a person receives a blow to the head, the brain can slosh inside the skull and even bang against it. This can lead to bruising of the brain, tearing of blood vessels, and injury to the nerves. When this happens, a person can get a concussion – a temporary loss of normal brain function.

33. A concussion or mild traumatic brain injury ("MTBI") has been defined as "a

complex pathophysiological process affecting the brain, induced by traumatic biomechanical forces.” In simple terms, a concussion is an injury to the brain that may result in temporary or permanent loss of normal brain function.

34. The milder indications of a concussion include headaches, lack of concentration, problems with memory and judgment, lack of coordination and difficulty with balance. The more significant effects can include Post-Concussion Syndrome (“PCS”), Chronic Traumatic Encephalopathy (“CTE”) and Second Impact Syndrome (“SIS”).

2. Signs and symptoms of concussions.

35. Although a concussion is commonly perceived as causing loss of consciousness (passing out), a person can have a concussion and never lose consciousness. As Defendants have known for decades, symptoms of a concussion may include:

- “seeing stars” and feeling dazed, dizzy, or lightheaded;
- memory loss, such as trouble remembering things that happened right before and after the injury;
- nausea or vomiting; headaches;
- blurred vision and sensitivity to light;
- slurred speech or saying things that don’t make sense; difficulty concentrating, thinking, or making decisions;
- difficulty with coordination or balance (such as being unable to catch a ball or other easy tasks); and
- feeling anxious or irritable for no apparent reason; or feeling overly tired.

36. Repeated injury to the brain can lead to swelling, and sometimes people develop long-term disabilities, or even die, as a result of serious head injuries. It is therefore very important to recognize and understand the signals of a concussion.

37. When post-concussion symptoms persist beyond a month, most refer to this condition as post-concussion syndrome (PCS). PCS symptoms can include headaches, fatigue,

memory problems, feeling in a fog, depression, impulsivity, and other physical, cognitive, mood, and behavioral problems.

3. Chronic Traumatic Encephalopathy or CTE.

38. CTE is a progressive neurodegenerative disease caused by repetitive trauma to the brain which eventually leads to dementia and other neurological disorders. Often there can be a delay of years or even decades between the end of the repetitive head impacts (*i.e.*, the end of playing football) and the beginning of the symptoms. CTE often presents with recent memory loss and other cognitive impairments similar to those experienced by people with Alzheimer's disease. People with CTE can also have changes in behavior (*e.g.*, impulsivity, rage, aggression, having a short fuse) and mood (*e.g.*, depression, hopelessness, feeling suicidal).

4. Second-Impact Syndrome or SIS.

39. When athletes who have sustained a concussion return to competition too soon, they risk the occurrence of SIS, a condition that can cause serious head trauma or even death.¹⁰ SIS occurs when an athlete sustains a second blow to the head before the symptoms from the first concussion have subsided, or before the brain has fully recovered. The second injury may occur within minutes, days, or even weeks after the first, and still have a devastating effect.

40. Even a relatively light hit, if sustained during this vulnerable post-concussion period, may spark the onset of SIS. The second impact causes rapid swelling of the brain, resulting in cerebral edema. When the brain swells, the pressure inside the skull increases, preventing blood flow to the brain and decreasing the brain's essential oxygen levels, causing substantial injury or death.¹¹

5. After a concussion.

41. After a concussion, the brain needs time to heal until all symptoms of a

¹⁰ See AAN Statement at 581 (recognizing cumulative damage of multiple concussions); *Handbook*, *supra* ¶ 37, at 53 ("There are potentially serious complications of multiple or severe concussions, including second impact syndrome, post-concussive syndrome, or post-traumatic encephalopathy"); see also Sean Gregory, *Study: Kids Competing Too Soon After Concussions*, TIME (Jan. 21, 2009), <http://www.time.com/time/magazine/article/0,9171,1873131,00.html> (reporting on concussion study by the Center for Injury Research and Policy at Nationwide Children's Hospital that found half of concussed student-players returned too soon to play).

¹¹ Cantu RC: Second Impact Syndrome a risk in any contact sport. *Physician and Sports Medicine* 23:27 (1995); see also, *Brain and Nervous System Health Center: Brain Swelling*, WebMD, <http://www.webmd.com/brain/brain-swelling-brain-edema-intracranial-pressure?print=true> (last updated Mar. 2, 2010) (describing brain swelling).

concussion have cleared up before returning to normal activities. The amount of time someone needs to recover depends on how long the symptoms last. Healthy teens can usually resume their normal activities within a few weeks, but each situation is different. A doctor should monitor the athlete closely to make sure it is appropriate to return to the game.

42. A football player who has had a concussion and has not recovered within a few months is said to have post-concussion syndrome. The person may have the same problems described earlier – such as poor memory, headaches, dizziness, and irritability – but these will last for longer periods of time and may even be permanent.

43. If someone has continuing problems after a concussion, the doctor may refer him or her to a rehabilitation specialist for additional help.

B. Long-Term Effects of concussive and sub-concussive hits.

44. Several major studies of the long-term effects of concussions have been conducted by Boston University's Center for the Study of Traumatic Encephalopathy, the Brain Injury Research Institute, the Veterans' Administration, and other institutions. These studies have revealed the "devastating consequences" of repeated concussions, including an increased risk of depression, dementia, and suicide.

45. Further, the studies have demonstrated the physiological effect of multiple hits on the brain, manifested by red flecks of protein deposits on the brain called present with CTE. Generally, these proteins appear when the brain is hit, and disappear as healthy brain cells devour them, leading to recovery. Yet, when the brain suffers too many blows, the brain cells cannot keep up with the protein and eventually give up and die, leaving just the red flecks associated with CTE.

46. Published peer-reviewed scientific studies have long shown that concussive and sub-concussive head impacts while playing football are linked to significant risk of permanent brain injury. This head trauma, which includes multiple concussions, triggers progressive degeneration of the brain tissue. The brain degeneration is associated with memory loss, confusion, impaired judgment, paranoia, impulse control problems, aggression, depression, and eventually, progressive dementia. As discussed in detail below, these publications have been

available to the Defendants for years, yet they failed to act in accordance with their duties to protect their players and warn them of the long-term risks.

47. Most recently, the NFL, which for years disputed evidence that its players had a high rate of severe brain damage, stated in federal court documents that it expects nearly a third of retired players to develop long-term cognitive problems and that the conditions are likely to emerge at “notably younger ages” than in the general population. The NFL has agreed to a class settlement offering certain players with probable diagnoses of one or more long-term brain injuries compensation (between \$1.5 million/player for the least severe, up to \$5 million for ALS).¹² In addition, the NCAA has agreed to a class settlement for medical monitoring only of former NCAA athletes from a fund of up to \$75 million, though no portion of that fund is to be paid for personal injuries to the athletes or even for their ongoing medical care. *See* Case No. 1:13-CV-09116 (N.D. Ill.).

C. The role helmets are supposed to play in reducing brain injuries.

48. The CDC estimates that 100,000 traumatic head injuries occur in football every year. The importance of understanding and preventing these head injuries is increasing because athletes have been getting “bigger, faster, and stronger,” according to Riddell, resulting in more violent collisions that are more likely to cause concussions.

49. The mechanisms underlying these concussions, as well as methods of prevention, have been investigated both in the laboratory and in the field. Over the years, equipment changes have been proposed in an attempt to help prevent catastrophic brain injuries, including modifications of helmets and mouth guards. This equipment has been critical for injury prevention since helmets have been shown to protect against skull fracture, severe TBI, and death.

50. Protective headgear and helmets decrease the potential for severe TBI after a collision by reducing the acceleration of the head on impact, thereby decreasing the brain-skull collision and the sudden deceleration-induced axonal injury. The energy-absorbing material within a helmet accomplishes this by compressing to absorb force during the collision and slowly

¹² *See also* <https://nflconcussionsettlement.com/Home.aspx>

restoring to its original shape. This compression and restoration prolongs the duration of the collision and reduces the total momentum or force transferred to the head. The protective material in football helmets has evolved over time from inner suspension systems to traditional foam padding to gel-filled and inflatable padding.

51. There are variations in helmet design based on the demands and constraints of each sport. Although helmets and headgear in most sports are good at mediating the high-impact collisions responsible for severe TBI, the question remains as to what extent the helmets and headgear of each sport are able to respond to the lower-impact collisions and rotational and linear acceleration forces responsible for concussions.

52. Early helmets consisted of nothing more than leather padding but later designs began including metal, rubber, and plastics to provide additional protections.

53. Despite innovations in helmet design, the incidence of head injuries continued to increase, prompting the formation of the National Operating Committee on Standards for Athletic Equipment (“NOCSAE”) in 1969 to initiate research efforts for head protection and to implement the first football helmet safety standards in 1973.

54. The goal of NOCSAE was to develop a standard that would measure the ability of the football helmet to withstand repeated blows of various magnitudes under a wide variety of playing conditions without sacrifice in protective quality. Early helmet models were designed to protect areas of the player’s head directly covered by the helmet from direct linear impact only.

55. Since its inception, NOCSAE has been working to improve athletic equipment, and to reduce injuries through creating uniform standards for athletic equipment. Efforts include the development of performance standards for football helmets as well as research to better understand the mechanism and tolerance of head and neck injuries and the design and structure of football helmets.

56. The NOCSAE helmet safety standards are voluntary test standards that have been developed to reduce head injuries by establishing requirements for impact attenuation for football helmets and face masks. Manufacturers test their own helmets to ensure they meet NOCSAE

helmet safety standards, but it is mandatory for all football players to wear helmets bearing the NOCSAE certification seal.

57. The NOCSAE organization is comprised of representatives from a number of national representative organizations that have an interest in athletic equipment and which include manufacturers, re-conditioners, athletic trainers, coaches, equipment managers, sports medicine doctors, and consumer organizations. The organization is funded with licensing fees collected from helmet manufacturers whose products bear the NOCSAE seal.

58. NOCSAE does not possess a surveillance force to ensure compliance with its standards. NOCSAE receives no oversight from any independent agency, such as the Consumer Product Safety Commission or the Occupational Safety and Health Administration, and the standards are voluntary and are available for adoption by any equipment manufacturer, user group, or athletic regulatory body.

1. Attempts to measure concussion protection.

59. NOCSAE rates helmets numerically on a “Severity Index.” Severity Index scores reflect how well helmets absorb the energy from an impact by measuring the effects on the head and brain. The higher the score the greater and potentially more damaging the effects. In order to obtain the NOCSAE certification seal, helmets are tested on a pass/fail standard. To pass, helmets must score below 1200 SI at all impacts.

60. The current testing standard involves mounting a football helmet on a synthetic head model and dropping it a total of 16 times onto a firm rubber pad, including two each from at height of 60 inches onto six locations at ambient temperatures. Two 60-inch drops onto the side are also conducted immediately after exposure of the helmet to 120 degrees Fahrenheit for four hours.

61. The NOCSAE standard was developed to reduce the incidence of traumatic brain injuries, like skull fractures and cervical spine injuries; however, these test methods *were not* explicitly developed with the goal of reducing MTBI and/or concussions. The NOCSAE standard SI threshold is well in excess of the values associated with concussions, and all adult helmets in use today vastly outperform the 1200 SI threshold.

62. NOCSAE helmet standards have remained largely unchanged since 1973, with the exception of the SI ratings, which changed from 1500 SI to 1200 SI in the early 1990s. According to Mike Oliver, the executive director of NOCSAE, the group's standards do limit linear acceleration – one of the forces behind concussions – but is not designed to rate protection against concussions.

63. In a November 2000 report sent to Riddell, Biokinetics (the biomechanics firm hired by Riddell) wrote that SI scores well below the 1200 mark still carried a high risk of concussion and brain injury. The report concluded “a concussion is almost certain to occur at SI levels half that of the current NOCSAE standard.”

64. Elsewhere in the report, Biokinetics reported that a player wearing a helmet that scored 291 SI during an impact – well within the safety threshold – would have a 50 percent probability of suffering a concussion and a helmet that scored 559 SI during the same impact would carry a 95 percent risk of concussion.

65. Other studies have suggested that NOCSAE's SI index, which rates helmet protectiveness based solely on the risk of skull fracture, is insufficient as a stand-alone concussion or near-concussive injury risk metric.¹³

66. The studies commissioned by Defendants sought to improve guidelines for improved helmet standards and also concluded that the contribution of rotational forces, which are not taken into account by the current SI ratings, play a significant role in the risk of concussion.

67. Despite having this knowledge, Defendants failed to act to sufficiently improve the design of their helmets to provide safer equipment and better protection to their helmet users.

68. The ultimate goal of a helmet manufacturer should not be to simply design a helmet to pass the NOCSAE standards, but rather the goal of helmet design should be to identify and require better impact protection to better protect the player throughout the widest range of injurious impact conditions and mitigate the risk of head injuries during play.

¹³ A. Bartsch, *et al.*, *Impact Test Comparisons of 20th and 21st Century American Football Helmets*, J. Neurosurgery 116:222-233 (2012).

69. Throughout the latter half of the 20th century and continuing to present day, Defendants¹⁴ designed, developed, manufactured, sold, and distributed equipment used in high school football competition, including equipment used by high school football players, including, but not limited to, the following:

a. In the 1950s, Defendants manufactured a face-mask component for their helmets, which was eventually patented.

b. In 1962, the Defendants used a “U” shaped nose protector with a shell (known as the TK2) molded out of polycarbonate. The Defendants also designed an open/closed cell foam and composite liner system for this model to increase the efficiency of the webbed suspension.

c. In 1963, the Defendants developed the TAK-29 helmet, which was the first to use air inflation for fitting the helmet snug to the head. The TAK- 29 shell, like the TK2, displayed the protective polycarbonate plastic, in addition to including tough shock and cut-resistant face-mask attachment straps.

d. In 1973, the Defendants developed, designed, manufactured, sold, and/or distributed an air cushion helmet (known as the Pac-3) whose interior system consisted of individual vinyl air cushions with layers of fitting and energy absorbing foam.

e. In 1982, the Defendants developed, designed, manufactured, sold, and/or distributed a M155 helmet model with a combination of foam and liquid- filled cells used for padding, though safer, more energy absorbing materials and designs were known to and available to Riddell.

f. In 1992, Riddell introduced the VSR Series of football helmets. Despite years of knowledge that the VSR Series is defectively designed and fundamentally unsafe, Riddell continues to sell and keep this helmet in use. The VSR-4 helmet has now been banned by the NFL due to safety concerns.

g. In 2002, the Defendants developed, designed, manufactured, sold, and/or distributed the Riddell Revolution line of helmets designed with the claim that the helmets could reduce the risk of concussion and head injuries even though Defendants knew or should have known these helmets would not.

¹⁴ As stated, on information and belief, Defendant BRG acquired the liabilities for helmet design defect, failure to warn, and negligence of Riddell’s affiliate entities, including Riddell Sports Group, Inc. when BRG was formed and acquired those entities on or about 2003.

70. Each Defendant at all relevant times engaged in the business of selling, manufacturing, designing, testing, engineering, marketing, modifying, assembling, inspecting, distributing, and controlling the helmets and other similar equipment for use by football players including Plaintiffs.

2. “Modern” helmet designs.

71. Modern football helmets’ basic design elements include the use of hard plastic exterior housing materials of various stiffness to absorb the force of collision (“the shell”) and an inflating system meant to ensure proper fit (“the liner”).

72. The object of the shell is to provide a smooth, hard outer surface, which resists penetration and is designed to distribute the impact load onto a large area. The shell will reduce the force transmitted to the liner and the head if it can effectively spread a localized impact load over a large segment of the shell. Today, most football helmet shells are typically constructed with polycarbonate or thermoplastic material. Thermoplastic is less rigid than fiberglass and can buckle upon impact.

73. Football helmets also include a shock absorbing liner system. The shock absorbing liner is positioned on the inside of the helmet to “manage” the force being transmitted through the shell. As the second line of defense, the liner provides absorption in order to manage the force transmitted to a player’s head and neck. The energy of the impact is absorbed as the material in the liner system compresses. If the liner is very dense and stiff, the energy cannot be absorbed into the material and is passed through to the skull of the head. Consequently, the right choice for shock absorbing liner is one which will manage predictable levels of force in foreseeable impacts by deforming in a controlled fashion. The liner, as it is compressed, absorbs the impact force over time.

74. The energy-absorbing materials have been available for use in helmet manufacture since at least 1992, and such materials within a helmet can reduce acceleration of the head-on impact by compressing to absorb force during the collision; however, not all helmets are designed equally in their ability to reduce this acceleration resulting from impact. The characteristics or properties of the padding or cushioning used in helmet design are an important

component of the liner system. Materials such as Vinyl Nitrile (VN) and more recently thermoplastic polyurethane (“TPU”) have been shown to help reduce head impact acceleration by absorbing energy more effectively throughout a wider range of temperatures thus reducing force on the brain and risk of injury.¹⁵

75. The goal of a helmet is to mitigate the risk of head injuries and improve the level of safety during play. To better protect against brain injuries and concussions, a well-designed helmet must therefore both absorb energy from the impact, leaving less energy for the skull and brain, and also cushion the impact to minimize the magnitude of deceleration. Other advances include increases in the size and coverage of the helmet which provide more space for better liner materials such as thermoplastic shock absorbers filled with air such as those depicted below:

76. Even though engineering advances made by helmet manufacturers have undoubtedly improved the overall performance of the football helmet, Riddell has and continues to communicate a level of protection that their helmets do not provide, has failed to implement safer available designs, and has implemented lax standards and practices.

77. For example, materials exist and have existed, such as TPU cushioning and/or air-filled shock absorbers that are capable of absorbing energy in a more efficient manner and more effectively throughout a wider range of temperatures than traditional foam padding, which were ignored and not implemented by Riddell. Defendants have and had a duty to incorporate and utilize those materials in their liner systems to better protect their helmet users, but failed to do so.

D. Since inception, Riddell has continuously promoted their helmets as “safe,” yet they failed to properly and adequately warn of the dangers and risks associated with concussions and sub-concussive hits.

78. The company was started by John Tate Riddell. Riddell first invented the removable cleat and then went on to invent the first ever plastic helmet in 1939.¹⁶

¹⁵ G. Gimbel, *et al.*, *A Comparison between Vinyl Nitrile Foam and New Air Chamber Technology on Attenuating Impact Energy for Ice Hockey Helmets*, INTERNATIONAL JOURNAL OF SPORTS SCIENCE AND ENGINEERING, Vol. 02, No. 3, pp. 154-161 (July 2008).

¹⁶ See <http://www.riddell.com/history#>

79. In the early 1940s, Riddell invented the first plastic suspension helmet followed by a series of newer models with different designs and liner systems such as the TAK-29, Pac-3, M155, VSR Series to the Revolution line of helmets released in 2002.

80. In 1962, Riddell designed and began using an open/closed cell foam and composite liner system in their football helmets to increase the efficiency of the webbed suspension.

81. In 1982, Riddell developed, designed, manufactured, sold, and/or distributed a newer model football helmet, the M155 that utilized a polyurethane front pad and updated suspension system with a combination of foam and liquid-filled cells used for padding.

82. In 1992, Riddell introduced the VSR Series of football helmets, which were widely popular but have now been banned by the NFL (as to the VSRR-4 model). According to Riddell's website, the VSR-4 helmet dominated the football landscape during its time and was used by 60% of players in the NFL, and nearly the same levels of market share were achieved in college and high school helmets made by Riddell.

83. Throughout Riddell's history, the company has continuously marketed and advertised their football helmets to the public as "SAFE" for use by football players.

84. Due to intentionally misleading marketing and insufficient warnings, Riddell's helmets become synonymous with the football-safety legacy built up by this 50-year advertising campaign targeted to players like Plaintiffs. And in 1989, Riddell's notoriety reached new heights through their signing of an exclusivity agreement with the NFL.

85. Throughout the 1980s and 1990s, the helmet warnings on Riddell helmets mentioned nothing about concussions. In fact, prior to 2002, Riddell's label stated:

"Do not use this helmet to butt, ram or spear an opposing player. This is in violation of the football rules and such use can result in severe head or neck injuries, paralysis or death to you and possible injury to your opponent. No helmet can prevent all head or neck injuries a player might receive while participating in football."

86. While a properly designed helmet may be able to reduce risk of certain head injuries, Riddell's helmets were insufficiently capable of providing *full* protection against the risk

of concussions and sub-concussive blows, and Defendants knew of these limitations, yet failed to provide an effective warning of such.

87. Riddell breached their duty to properly educate and/or properly warn their helmet users of these dangers. Such a warning should alert, inform, and/or remind Riddell's helmet users of the hazards associated with the product's use, the recommended methods of using the product, certain limitations or restrictions placed on its use, procedures for properly fitting or adapting the product to an individual user, procedures to be followed if an injury (or suspected injury) occurred while using the product, and admonitions regarding how and when an injured football player might return to the activity after recovery from the injury.

88. Riddell failed to include any such adequate warnings – in the form of on-product labels affixed to different portions of the helmet – that would alert and/or inform football players of the true risks and hidden dangers associated with concussions, brain injuries and repetitive brain trauma.

89. Riddell failed to disclose that the helmets as supplied did not perform in the manner represented. By failing to provide adequate warnings, Riddell created and profited off of a false sense of protection and led players such as Plaintiffs to take more risks as opposed to mitigating such risks.

90. At bare minimum, Riddell's warnings should have: a) been conspicuous and noticeable to those needing to be warned; b) explicitly identify the hazards of long-term injuries possible from concussive and sub-concussive blows while wearing the helmet that were known to Riddell; c) stated the consequences associated with coming into contact with the hazards; and d) advised the user as to how to avoid being exposed to or affected by the hazards.

91. Riddell's helmet warnings were inadequate based upon warning and design defects or deficiencies that failed to include the above-referenced considerations and Riddell knew or should have known of the product warning deficiencies and failed to adequately correct these deficiencies at any time during the initial warning label design and after becoming aware of the dangers and risks associated with repetitive head impacts and concussions.

92. Riddell breached their duty to ensure that any hazards contained in or associated with the foreseeable use of their products are properly mitigated. Methods of hazard mitigation include: a) designing out or eliminating those hazards; b) modifying the product so that users are protected or shielded from exposure to the hazards; and c) by instructing users how to properly use their product, and/or by adequately warning users of the hazards they are likely to face when using the product.

93. Riddell's inadequate warnings failed to comply with established standards or generally recommended practices regarding the form, configuration, and content of precautionary messages and/or safety instructions.

94. Riddell was fully aware of and yet failed to adequately warn, protect and educate these football players of the dangers and increased risks of repeated traumatic head impacts and development of neurodegenerative disorders and diseases.

95. Riddell had a duty to provide necessary and adequate safety and instructional materials and warnings of the risk and means available to reduce and/or minimize the risk of concussive brain injuries while playing football but breached their duty to Plaintiffs by placing deficient and/or inadequate warning labels on their helmets.

E. Later, Riddell knowingly capitalizes on the growing concussion crisis by promoting a false sense of protection in their helmets (applies to Plaintiffs who wore Riddell helmets after 2002).

96. The issue of concussions, their debilitating effects both long and short-term, and player safety at all levels of sport are now front and center stage and continue to receive increasing attention. One significant reason for this increased awareness of concussions is due to the publicity and media attention on concussions in professional sports, such as the NFL, and the long-term catastrophic effects of repetitive concussive and sub-concussive blows.

97. On information and belief, for decades Riddell hid and downplayed the link between repetitive concussive and sub-concussive blows to the head while wearing their products. However, in the early 2000s, in order to take advantage of growing, yet still limited concern and awareness of concussions and their potentially devastating effects, Riddell sought to profit through the production, marketing and sales of equipment that they claim can reduce the

frequency and/or severity of concussions. Despite the marketing hype as to how modern helmets reduce the incidence and severity of concussions, the rate of concussions amongst football players continued to rise.

98. In 2002, the Defendants released a new helmet, ambitiously called the “Revolution,” specifically manufactured, designed, and marketed to “reduce the incidence of concussions” as “a first- of-its-kind helmet.” This would become one of the most widely used helmets and earn millions in sales to players in college, high school and youth leagues. To the contrary, court documents recently made public during a Colorado lawsuit against the Defendants revealed that Biokinetics sent Defendants a report in 2000 showing that no football helmet, no matter how revolutionary, could completely prevent concussions. Despite the findings of this report, Defendants were not deterred from marketing their helmet as effective protection against concussions.

99. As part of their effort to capture the largest share of the helmet market, Defendants decided to conduct what would *appear* to be a scientific study regarding the purported concussion protective benefits of the Revolution helmet.

100. Following the release of the Revolution helmet, Defendants funded research at the University of Pittsburgh Medical Center (“UPMC Study”) to study its helmet. The findings of the study were published in the February 2006—four years after Riddell began marketing it—in the issue of the scientific journal *Neurosurgery*.¹⁷ Based on the UPMC Study funded by a grant from Riddell and co-authored by Riddell’s senior vice president for research and development, Thad Ide, Riddell began to tout the Revolution helmet as reducing concussions by 31%.

101. The UPMC Study was flawed from the start and presented significant potential conflicts of interest. Commencing in 2002, the authors of the UPMC Study compared the concussion rates and recovery time for athletes wearing *new* Riddell Revolution helmets to athletes wearing what was referred to as *traditional* helmets. The “traditional” helmets were not new, although Riddell claimed that they were reconditioned. Reconditioning involves cleaning,

¹⁷ M. Collins, *et al*, *Examining Concussion Rates And Return To Play In High School Football Players Wearing Newer Helmet Technology: A Three-Year Prospective Cohort Study*, NEUROSURGERY, Vol. 58, No. 2. (February, 2006).

sanitizing, inspecting, repairing (if necessary) and recertifying the helmets but rarely does the process involves replacing the foam padding in the liner system of the helmet, a critical part of the helmet that wears out and degrades over time.

102. Defendants provided a grant to pay the salary of two leading authors of the study. A third author, Thad Ide, is a Riddell employee. Defendants' payment of the salaries of Collins and Lovell is a significant potential conflict of interest that was subsequently raised by many commentators regarding the study. Of equal or greater concern is the fact that Riddell directly employed the third researcher – Thad Ide, the owner of the patents covering the Revolution helmet. Ide, as owner of at least two patents covering the helmet, had a direct financial stake in the positive outcome of the study. In their marketing campaign, Defendants failed to disclose to their helmet users the potential conflicts of interest as well as significant limitations in the study's design and outcome.

103. In addition, three of the study's authors are co-owners of ImPACT, a company that manufactures and distributes computerized neurocognitive testing software. Upon information and belief, ImPACT and Riddell entered into an agreement whereby Riddell would receive a commission for any ImPACT sale that is completed through a Riddell initiated contact. The authors used ImPACT concussion management software for the UPMC Study, but given Riddell's direct financial interest in the success of ImPACT, there is a serious question as to whether the software is effective and useful in a study of this nature. In fact, many in the science community have questioned the reliability and validity of ImPACT's software noting, "the vast majority of studies evaluating ImPACT have been written by the very researchers who developed it."¹⁸ Likewise, in 2007, an ESPN.com investigation found that "on at least seven occasions since 2003, Lovell has authored or co-authored studies on neuropsychological testing, including papers directly evaluating ImPACT, without disclosing his roles in creating and marketing ImPACT."¹⁹

¹⁸ See http://espn.go.com/espn/otl/story/_/id/8297794/neuropsychological-testing-concussions-not-panacea.

¹⁹ *Id.*

104. Beyond the financial conflicts of the study, the study was a “prospective cohort study,” not a random study that focused on a subset of high school players in the Pennsylvania Athletic Association. From 2002 to 2004, the study tracked approximately 2,000 high school football players, with slightly more than half wearing Defendants’ new Revolution helmets and slightly fewer wearing “traditional” helmets. The traditional helmets were drawn from the schools’ inventories and were not new. The study participants were also not randomly assigned helmets which represent a significant limitation in the study design and use of study data.

105. The final three-year study considered only 2,141 of the 2,207 participants, with 1,173 fitted with the Revolution and 968 fitted with traditional helmets. Using these numbers, as opposed to the total number of participants, the concussion rates were 5.3% and 7.6% respectively, which the authors described as a “statistically significant difference.” According to two of the study’s authors, the results “demonstrated *a trend* toward a lowered incidence of concussions” but the “limited size sample precludes a more conclusive statement of findings at this time.” This is a critical and dispositive limitation that Defendants ignored and/or concealed when marketing the line of Revolution helmets.

106. Indeed, Defendants ignored other warnings by UPMC about exploiting the data in scientifically inappropriate ways. The authors of the UPMC Study not only disputed the 31% figure, but notified the Defendants that “this data should not be used as a marketing ploy or marketing tactic from a scientific paper that was done not for those purposes.” One of the authors, Dr. Joseph Maroon, later responded that the study actually stated that an athlete wearing the Revolution helmet was associated with “approximately a 31% decreased relative risk and 2.3% decreased absolute risk for sustaining a concussion in the study.” By focusing solely on the larger number, which referred to a relative decrease in risk, and without acknowledging the study’s limitations, Defendants exaggerated any benefits.

107. In addition, Dr. Robert Cantu, a neurosurgeon and leader in the field of sports-related concussion research, wrote a comment published in Journal of Neurosurgery that the study contained a “serious, if not fatal methodological flaw.” The study was flawed in that it compared the performance of the new Riddell Revolution helmet with players wearing used and

reconditioned helmets of unknown age and condition. Dr. Cantu further stated it was “impossible to compare the two” and to be “cautious in drawing any conclusions from this type of study.”

108. Nevertheless, the 31% concussion reduction claim was the centerpiece of the Defendants’ marketing campaign, which fueled sales of the Revolution helmet model. Defendants launched a media campaign featuring the concussion reduction claim which, according to their “Riddell Revolution UPMC Media Campaign Highlights” video news release, created “over 60 million media impressions, nearly 150 television placements, over 100 newspaper clips, over 250 on-line placements, [and] 6 live sports radio interviews.”²⁰

109. In their marketing campaign, Defendants did not, in any way, disclose the warnings about the UPMC Study given to them by the two non-Riddell employee authors. Nor did Defendants disclose that the statistical difference was only arrived at by analyzing an incomplete set of the data population or other limitations in the study’s design. For example, during the study’s peer review process for publication in *Journal of Neurosurgery*, a reviewer criticized the difference in the age of the helmets used, noting that “it is well recognized that a new football helmet has a lower [severity index] rating than an older helmet. This is why helmets are recertified after a period of years. We know the Riddell helmets in this study are new but we have no mention of the other helmets. This invalidates any comparison.”

110. In a patent infringement case between Riddell, Inc. and Schutt Sports, Inc., Riddell’s senior vice president for research and development, Thad Ide, testified that Riddell’s sole basis for the 31% reduction in concussion claim was the UPMC study by Dr. Collins.²¹ “There are no other bases for the specific 31 percent reduction claim.”²²

111. In 2011, a Congressional hearing was held on the topic of “Concussions and the Marketing of Sports Equipment” which cited yet another example of Defendants’ misleading advertising taken from their website that failed to disclose Riddell’s role in funding and writing the UPMC Study includes:

²⁰ Concussions and the Marketing of Sports Equipment: Hearings before the Committee on Commerce, Science, and Transportation, Senate, 112th Cong., 6 (2011) (Statement of Hon. Tom Udall, U.S. Senator from New Mexico).

²¹ See *Riddell, Inc. v. Schutt Sports, Inc.*, 724 F. Supp. 2d 963, 977 (W.D. Wis. 2010) (Ides Dep. 221:24-222:8.).

²² *Id.* (Ides Dep. 222:17-18.)

“An extensive long-term study by the University of Pittsburgh Medical Center was published in the February 2006 issue of Neurosurgery. The results were impressive: Players wearing the Riddell Revolution football helmet were 31 percent less likely to suffer a concussion than athletes who wore traditional or standard football helmets. For athletes who had never suffered a previous concussion, wearing the Riddell Revolution decreased their relative risk of concussion by 31 percent. . .”²³

112. Even more alarming was Defendants use of the 31% reduced risk of concussion claim to sell helmets *that were not actually tested in the UPMC Study*. The UPMC Study only tested the Riddell Revolution helmet, but not the Revolution Speed, the Revolution IQ, the Revolution IQ Hits, and the Revolution Youth. Nevertheless, Defendants falsely marketed the complete Revolution line of helmets as having "concussion reduction technology."

113. In yet another example of Defendants' misleading advertising campaign, Riddell's online store and website advertised the following:

Based on the same technology that made the varsity Riddell Revolution helmet possible – we offer in a Youth version – the Riddell Revolution Youth. . . . After an extensive long-term study by the University of Pittsburgh Medical Center was published in the February 2006 issue of Neurosurgery. The results were impressive: research shows a 31 percent reduction in the risk of concussion in players wearing a Riddell Revolution football helmet when compared to traditional helmets.

* * NEUROSURGERY, FEBRUARY 2006, VOL. 58, NO. 2”²⁴

114. As a result of Defendants' misleading 31% anti-concussion marketing campaign, sales increased across all helmet product lines. Sales of Revolution helmets skyrocketed to more than 2 million sold between 2002 and 2009 and included many helmets that were marketed as having “concussion reduction technology” even though they were not used in the UPMC Study.

115. In 2007, NOCSAE's technical director, Dave Halstead, told the New York Times in a story entitled “Studies for Competing Design Called Into Question” that “. . . the [Riddell] Revolution is a good helmet. . . . But I have problems with that particular [2006 Neurosurgery] study. The helmet is not shown to do what they say it does.” Public statements from the UPMC

²³ See <http://www.eastonbellsports.com/brands/riddell>, accessed Oct. 19, 2011.

²⁴ See [https://shop.riddell.com/riddell/app/displayApp/%28cpgsiz=20&layout=7.07 2 3 75 12 13 67 77 6 4 5&care=0000000002&cpnum=1%29/.do?rf=y](https://shop.riddell.com/riddell/app/displayApp/%28cpgsiz=20&layout=7.07%2037512%2067%2077%2064%205&care=0000000002&cpnum=1%29/.do?rf=y), viewed Oct. 17, 2011.

Study authors and other helmet safety experts have overwhelmingly called into question whether there is competent and reliable scientific evidence to substantiate Defendants' marketing claim.

116. Despite the well-publicized criticisms concerning the UPMC Study, the Chief Executive Officer of Riddell, Dan Arment, spoke before members of the House Judiciary Committee on January 4, 2010 at a hearing concerning "Legal Issues Relating to Football Head Injuries." In his testimony, he stated:

"We have independent, peer-reviewed, published research in the medical journal *Neurosurgery*, February of 2006, showing that the Revolution [helmet] reduces the risks of concussions by 31 percent when compared to traditional helmets. . . . Today, over one million high school, college, and professional players have made the switch from traditional helmets to the Revolution family of helmets."²⁵

117. As Revolution helmet sales continued to soar, Defendants' anti-concussion claims caught the attention of the Senator Tom Udall (D-MN) who sent a letter to the Federal Trade Commission ("FTC") requesting an investigation into what he called "misleading safety claims and deceptive practices in the helmet industry." Senator Udall was quoted as saying "several helmet manufacturers advertise helmets as built with "concussion reduction technology" or "designed with the intent to reduce concussions." These helmets are also marketed as meeting the National Operating Committee on Standards for Athletic Equipment ("NOCSAE") voluntary industry standard for football helmets. However, this football helmet standard does not specifically address concussion risks."

118. The FTC investigation focused on the flaws in the UPMC Study, and the FTC determined that the limitations of the study were sufficiently serious to preclude the conclusion made by Defendants that the design of the Revolution helmets was responsible for any purported difference in the concussions rates experienced.

119. Instead of contesting the FTC's findings or its criticisms of the UPMC Study's methodologies and unreliability, Defendants instead chose to wholly abandon making the 31%

²⁵ Legal Issues Relating to Football Head Injuries (Part II & II): Hearings before the Committee on the Judiciary House of Representatives, 111th Cong. 347-48 (October 28, 2009 and January 4, 2010) (Testimony of Dan Arment)

concussion reduction claim. From 2006 until early 2011, Defendants misrepresented the UPMC Study results and the protective capability of their Revolution helmets to increase their sales. Amazingly, Defendants continue to make the broader “concussion reduction technology” claim which continues to create a false sense of protection against concussions.

120. In the wake of concussion reduction claims made by certain equipment manufacturers, Mike Oliver, NOCSAE executive director issued the following warning:

“Because of the efforts of researchers, manufacturers and others, the progression and improvement of football helmets over the last 20 years has been remarkable. We have no doubt that technology will continue to improve. But claims or representations that a particular helmet is anti-concussive or concussion-proof, without scientific support, can be misleading and dangerous.”²⁶

121. Defendants’ marketing efforts—however misleading—paid off. According to 2013 trial testimony in *Ridolfi v. Riddell*, a case that eventually settled in Colorado State court, Nelson Kraemer, the Riddell corporate representative, testified that Riddell holds an approximately 50% market share of football helmets sold in the United States. Upon information and belief, Defendants also have a dominant market share – well over 50% – of the football helmet market.

F. Riddell’s defective helmet liner system.

122. Not only were Riddell’s warnings pre- and post-2002 inadequate, but Riddell has continued to utilize substandard materials in their helmet liner systems since the 1970s, though superior material and designs were available and known to Riddell. These substandard materials are less effective at absorbing energy, and thus substantially less likely to reduce the forces transmitted to a player’s head from both linear and rotational impacts and mitigate the risk of injury, i.e. concussions.

123. As late as 1994, Riddell was on notice that newer and better energy absorbing materials were available for use in their helmet liner systems. Later, in November 1999, Riddell’s consultant Biokinetics examined four different liner materials and configurations and

²⁶ See http://www.mshsaa.org/resources/pdf/NOCSAENews_242011.pdf

sent Riddell a memorandum recommending a newer material, Vinyl Nitrile (VN), as the best material for use in their football helmets.

124. Despite these recommendations, Riddell has continued to use urethane foam in the front pad over newer materials such as Vinyl Nitrile which perform better at attenuating energy at a wider range of temperatures thereby reducing force to the forehead. The proper selection of foam padding for the front pad of the liner system is extremely important because players sustain the majority of impacts to the forehead area, which is also the thinnest layer between the skull and brain.

125. Upon information and belief, Riddell utilized urethane foam padding in the front pad of their VSR helmet model, and continued the use of the same urethane foam padding in the front pad of the Revolution helmets (from 2002 through present).

126. Upon information and belief, Riddell designed, developed and/or manufactured their own urethane foam pads until 2006. Riddell then began using a third-party supplier to develop, manufacture and/or supply urethane foam pads for use in each of their helmets.

127. Upon information and belief, Riddell has continued to use a urethane foam in the front pad even though newer and safer materials exist that can be used at similar costs. For example, hockey helmets containing Vinyl Nitrile pads date back to the early 2000s and Vinyl Nitrile pads were not only available but were used in the rear and/or side pad components of the Revolution helmet.

128. Upon information and belief, Riddell began using Vinyl Nitrile in the rear and/or side pad components of the Revolution helmet as a means to better protect against rotational forces that can cause concussions. Furthermore, upon information and belief, Riddell used Vinyl Nitrile in the front pads of their lacrosse helmets instead of traditional urethane foam padding.

129. Upon information and belief, Riddell has faced multiple lawsuits since the mid-1990s whereby plaintiffs alleged the use of defective liner materials, in particular the front pad of the helmet that increased risk of injury and/or contributed or caused the plaintiffs' brain injuries. For example, in the Colorado case *Ridolfi v. Riddell, Inc., et al.*, the plaintiff's experts performed a materials comparison analysis and concluded that use of Vinyl Nitrile for the front pad instead

of the urethane foam front pad used in the Revolution helmet at issue would have provided significantly better protection against brain injury. The analysis concluded that the Vinyl Nitrile padding was able to attenuate and absorb energy at a better rate across a wider range of temperatures and conditions than the urethane foam used in the front pad of Revolution helmet.

130. In addition to Riddell's use of a substandard material in the front padding component of the defective liner system, Riddell's disregard for advancing technologies is exhibited by their choice to not utilize newer and safer materials in the rear and/or side pad components of any of their helmet models. For example, Riddell previously refused to consider the use of softer, though more expensive, shell helmet materials in the 1980s that would have dissipated more of the impact than traditional hard shells. Riddell has also failed to incorporate newer, safer and better energy absorbing materials such as air-filled chambers and/or thermoplastic polyurethane ("TPU") padding throughout the helmet liner system.

131. In a recent New York Times article that discusses the energy absorbing characteristics of helmet liner materials, another helmet manufacturer, Xenith LLC, recommended the use of thermoplastic shock absorbers throughout the liner system because these air-filled absorbers were capable of distributing a wider range of forces in a manner that reduced forces transferred to the head. Laboratory tests performed by Xenith, LLC showed that the thermoplastic disks could withstand hundreds of impacts without any notable degradation in performance, a drawback commonly found in traditional and/or urethane foams.

132. Another helmet manufacturer, Schutt Sports ("Schutt") developed a liner system that incorporates thermoplastic polyurethane ("TPU") cushioning to attenuate energy as well as foam-filled air bladders for better fit. Schutt began using TPU technology in their helmet liner systems in 2003 because independent laboratory testing showed that TPU padding was superior to traditional foam padding by providing better impact absorption, better heat management and better hygienics.

133. Other studies have shown that TPU air chamber technology is able to absorb more energy and perform better throughout more impact conditions than traditional foam padding.

134. The importance of the helmet liner system and use of adequate liner materials is

twofold. First, if the density of the liner pads is too soft for a given impact, the pads will compress too quickly and bottom-out; whereas, if the liner density is too hard for a given impact, the liner pads will fail to compress and mitigate the energy and forces distributed to the player's head. Thus, it is critical for a helmet to incorporate the right choice in liner materials/padding because the energy absorbing material is able to manage the impact over a longer period of time, helping reduce the forces of energy from both linear and rotational impacts and thereby mitigating the risk of injury.

135. Replacing traditional foam padding contained in a helmet's liner system with new technology such as air-filled materials and/or TPU materials will not only reduce the risk of brain injury, but has been shown to maintain its energy absorbing characteristics over a longer period of time. This is important because once a helmet is put in use by high schools and colleges, it is typically reconditioned every one to three years to ensure it meets NOCSAE certification standards.

136. Riddell has known that different helmets, by design, provide different levels of absorption which can therefore reduce the amount of force transferred to a player's head and spine for decades. Nevertheless, instead of improving upon the helmet's liner system and energy absorbing materials to reduce the force of impact, Riddell has haphazardly modified the liner systems with substandard materials in various helmet models, including but not limited to the TK2, TAK-29, Pac-3, M155, VSR Series and/or Revolution helmets.

137. Riddell has essentially ignored any opportunity to improve upon the helmet liner and shell system and design performance to reduce a player's risk of brain injury and concussions.

138. The goal of a helmet should not be to simply pass the certification standards, but rather to actually protect the player throughout the widest range of injurious impact conditions possible and mitigate the risk of head injury and improve the level of safety during play.

139. Riddell has failed to meet this goal by continuing to use a defective liner system comprised of substandard materials that do not attenuate energy in an efficient and effective manner to reduce the force transmitted to a player's head and minimize the risk of injury.

G. Riddell assumed a leadership responsibility for educating their customers—the Plaintiffs—and promoting safety in collegiate and high school sports but failed at all levels to provide adequate warnings and prudent concussion management tools.

140. Despite Riddell’s superior knowledge about the risks associated with concussions and repetitive head impacts, Riddell has never warned Plaintiffs or former professional football players of the long-term health effects of concussions.

141. In 1989, Riddell partnered with the NFL and became the League’s official helmet. The NFL formed the Committee on MTBI in 1994 in response to a growing number of concussions known to the league and Riddell. One of the committee’s stated goals was to improve understanding of the biomechanics of concussions, and to use that information to engineer a concussion-resistant helmet. Riddell worked closely with the Committee to conduct research and share data on helmet design and safety.

142. During the Congressional Hearings in 2010, Riddell’s President Dan Arment testified that, “for more than 70 years Riddell has passionately been at the forefront of providing state-of-the-art helmet technology,” and “as a market leader, we have always felt we have an obligation, not just as a business but in the public interest, to collaborate where possible and maintain the highest standard of innovation and research that has continued to stand the test of time, scrutiny and independent research...”

143. Since at least 1973, Riddell has continuously represented itself as a market leader that formed significant partnerships with a number of organizations including USA Football, American Youth Football, the NFL, the NFL Players Association, Collegiate and National Athletic Trainers’ Association to promote player education.

144. Riddell’s voluntary actions and authority throughout their history demonstrate that for over 70 years, Riddell shouldered the common law duty to make the game of football safer for the players through advancements in helmet technology and to keep the players informed of accurate, known safety information.

145. By voluntarily undertaking to study and report on the issue of concussions and helmet safety in football, Riddell assumed a duty to exercise reasonable care in their work and their public statements about a helmet’s ability to effectively reduce the risk of concussion.

146. Plaintiffs did not know, appreciate or understand the long-term impact of concussions and relied on Riddell to provide the protection that they promised.

H. Riddell was in a superior position of knowledge and authority and owed a duty to Plaintiffs.

147. The high incidence of concussions among football players has been well known to the Riddell. Riddell had a duty to adequately inform and warn football players of the risks associated with concussions and of repeated sub-concussive hits while wearing Riddell helmets. Players and their families have relied on the Riddell to disclose relevant risk information and protect their health and safety through instruction, counseling, and proper use of their products.

148. Riddell accumulated knowledge about head injuries to football players and the associated health risks therefrom, but that that information from their customers and Plaintiffs. Riddell was at all times superior to that available to Plaintiffs, both during and after their playing careers.

149. Riddell studied the biomechanics of head movement in relation to their products. Riddell knew or should have known that traumatic brain injury generally occurs when the head either accelerates rapidly and then is stopped or is rotated rapidly. The results frequently include, among other things, confusion, blurred vision, memory loss, nausea, and sometimes unconsciousness.

150. Riddell knew or should have known for many years that medical evidence has shown that symptoms of MTBI can appear hours or days after the injury, indicating that the injured party has not healed from the initial blow.

151. Riddell knew or should have known for many years that once a person suffers an MTBI, he is up to four (4) times more likely to sustain a second one. Additionally, after suffering even a single sub-concussive or concussive blow, a lesser blow may cause MTBI, and the injured person requires more time to recover.

152. Riddell knew or should have known for many years that non-professional football players and their families were unaware of the serious risk posed to the players' long-term cognitive health, caused by repeated head impacts while playing football.

153. Riddell knew or should have known for many years that clinical and neuropathological studies by some of the nation's foremost experts demonstrate that multiple head injuries or concussions sustained during a football player's career can cause severe cognitive problems such as depression, early-onset dementia, Parkinsonism, ALS, among other serious neurological conditions.

154. Riddell knew or should have known for many years that published peer reviewed scientific studies have shown that repeated traumatic head impacts (including sub- concussive blows and concussions) cause ongoing and latent brain injury. These injuries have been documented and associated with sports-related head impacts in both football and boxing since *at least* 1963.

155. Riddell knew or should have known for many years that neuropathology studies, brain imaging tests, and neuropsychological tests on many former football players have established that football players who sustain repetitive head impacts while playing the game have suffered and continue to suffer brain injuries that result in any one or more of the following conditions: early-onset of Alzheimer's Disease, dementia, depression, deficits in cognitive functioning, reduced processing speed, attention, and reasoning, loss of memory, sleeplessness, mood swings, personality changes, and the debilitating and latent disease known as CTE. CTE is also associated with an increased risk of suicide.

156. Since at least 1973, Riddell knew or should have known for many years that long-term brain injuries are found in athletes, including football players and boxers, with a history of repetitive head trauma. The changes in the brain caused by repetitive trauma are thought to begin when the brain is subjected to that repetitive trauma, but symptoms may not appear until months, years, or even decades after the last traumatic impact or the end of active athletic involvement—which is the case with each and every Plaintiff in this action.

157. Riddell knew or should have known the helmet standards set forth by NOCSAE are not designed to rate protection against concussions or long-term brain injuries.

158. Riddell knew or should have known that helmets without a proper liner system are ineffective in reducing both linear and rotational forces that result in concussions and/or brain

injuries. Riddell knew or should have known that materials such as Vinyl Nitrile and/or thermoplastic polyurethane (“TPU”) are better at absorbing energy throughout a wider range of temperatures and provide better protection against head impacts when used throughout liner systems of football helmets than the materials Defendants used in the VSR Series and Revolution line of helmets.

159. Riddell knew or should have known that helmets designed with materials such as thermoplastic polyurethane provide a safer means of attenuating and absorbing energy thereby reducing forces and energy directed to a player’s head and minimizing the risk of head injuries.

160. Riddell knew or should have known that there is no definitive scientific research to support claims that football helmets can completely protect against or reduce the frequency of concussions.

161. At all times herein mentioned, Riddell was fully informed of the actions of their agents and employees, and thereafter no officer, director or managing agent partner of Riddell or the other BRG repudiated those actions, which failure to repudiate constituted adoption and approval of the actions and all Defendants and each of them, thereby ratified those actions.

162. The harm, which has been caused to Plaintiffs, resulted from the conduct of one, or various combinations of the Defendants, through no fault of Plaintiffs.

163. Riddell was under a continuing duty to disclose and warn of the true character, quality, and nature of the after effects of head injuries. Because of the Riddell’s deceitful and fraudulent concealment and failure to warn of the true character, quality, and nature of the dangers and risks inherent in the sport of football, Riddell is estopped from relying on any statute of limitations defense.

164. As a direct result of the material misrepresentations by the Riddell, former players including Plaintiffs have been misled to believe that the symptoms of early-onset dementia, ALS, loss of memory, headaches, confusion, and the inability to function were not caused by events occurring while they played football in high school. And, as a result of this willful and malicious conduct, these former players including Plaintiffs have been deprived of medical treatment, incurred expenses, lost employment, and sustained other damages to be specified.

V.
TOLLING OF THE STATUTE OF LIMITATIONS

A. Fraudulent Concealment

165. Riddell has had access to decades-worth of science and research linking concussions and sub-concussive blows to latent brain injuries and disease. Riddell has or should have known of the risks and dangers of these latent brain diseases, including dementia, Alzheimer's, ALS, Parkinson's, and Chronic Traumatic Encephalopathy.

166. Riddell knew or should have known of the science and research well before Plaintiffs ever played even high school football and have known well after Plaintiffs stopped playing. Defendants have concealed from or failed to notify Plaintiffs, their families and the public of the full and complete nature of the true risks, symptoms and dangers of these latent brain diseases and Defendants' helmets could never have protected Plaintiffs from injuries.

167. Riddell still does not acknowledge the risks and dangers their helmets pose, even as their VSR line of helmets (Riddell's formerly most-widely distributed line, which was worn by many of the Plaintiffs in this case) has now been banned by the NFL. Riddell refuses to fully disclose the seriousness of the issue and in fact have downplayed the widespread prevalence of the problem.

168. Any applicable statute of limitation has been tolled by Riddell's knowledge, active concealment, and denial of the facts alleged herein, which behavior is ongoing.

B. Estoppel

169. Riddell was under a continuous duty to disclose to Plaintiffs the true character, quality, and nature of risks and dangers of repetitive head injuries, concussions and sub-concussive blows as well as latent diseases caused by these blows to the head while wearing Riddell helmets. Riddell not only failed to make full disclosure to Plaintiffs, it actively concealed the true character, quality, and nature of the risks and dangers and knowingly made misrepresentations about the characteristics, risks, and dangers. Plaintiffs reasonably relied upon Riddell's knowing and

affirmative misrepresentations and/or active concealment of these facts. Based on the foregoing, Riddell is estopped from relying on any statutes of limitation in defense of this action.

C. Discovery Rule.

170. The causes of action alleged herein did not accrue until Plaintiffs and their families discovered the latent diseases and/or diagnosed the terrible symptoms that Plaintiffs suffered without any knowledge of the cause. Plaintiffs, however, had no realistic ability to discern that the symptoms they were experiencing were linked to latent brain disease, linked to the blows to the head they suffered during play until - at the earliest - after either the symptoms were finally recognized or after they learned of this litigation. And even then, Plaintiffs had no reason to discover their causes of action because of Riddell's active concealment of the true nature of the risks and dangers.

VI.
CAUSES OF ACTION
COUNT I - NEGLIGENCE

171. Plaintiffs adopt and incorporate by reference paragraphs 1-170 of this Complaint as if fully set forth herein.

172. Defendants were negligent in the design, testing, marketing, and engineering of the helmets worn by Plaintiffs.

173. Prior to, during, and after the years Plaintiffs played football, Defendants knew of the harmful long-term effects of brain traumas sustained by their customers like Plaintiffs while wearing Riddell's purportedly protective equipment; however, Defendants misrepresented and concealed those facts to induce Plaintiffs and others to continue using Riddell helmets. Plaintiffs relied on these misrepresentations and believed them to be true and continued to utilize the Riddell helmets in justifiable reliance on the truth of Defendants' statements.

174. Defendants owed a duty of care to Plaintiffs in the design, testing, marketing, and sale of the helmets and all components and sub-assemblies of the helmets.

175. Defendants were or should have been aware that repeated blows to the head can cause to long-term brain and neurocognitive injuries in their customers, including, but not limited to, memory loss, dementia, depression, and CTE and its related symptoms. Defendants breached their duty of reasonable care by failing to provide necessary and adequate safety and instructional materials and warnings of the risk and means available to reduce and/or minimize the risk of concussive brain injuries while playing football using their helmets.

176. Defendants failed to provide necessary and adequate information, warnings, and/or instructional materials regarding the fact that other model helmets provided greater shock attenuation from blows to the head area.

177. Defendants possessed special and superior knowledge of the potential risks and substantial dangers to users of their football helmets, but negligently and carelessly failed to adequately warn or instruct users of the potential risks and dangerous and defective conditions of their above-described football helmets including but not limited to helmets with a safer means of attenuating and absorbing the foreseeable forces of impact in order to minimize and/or reduce the forces and energy directed to the player's head.

178. As a result of Riddell's breach of duty to Plaintiffs, they suffered long-term brain injuries. Because Plaintiffs did not know, nor could he have discovered through the exercise of reasonable diligence that Riddell's and BRG's breaches and misrepresentations increased Plaintiffs' risk and exposure to traumatic brain injuries that Adams now suffers, any applicable statute of limitations is tolled by Defendants' misconduct and concealment of information.

COUNT II -DESIGN DEFECT

179. Plaintiffs adopt and incorporate by reference paragraphs 1-178 of this Complaint as if fully set forth herein.

180. At the time the Riddell helmets worn by Adams were designed, manufactured, sold, and distributed, they were defective in design, unreasonably dangerous, unsafe for their intended purpose, and failed to perform as safely as an ordinary consumer would expect when used in an intended or reasonably foreseeable manner because the helmets did not provide adequate protection against the foreseeable risk of concussive brain injury. Defendants acted unreasonably at the time of design in light of the foreseeable risk of injury from the use of their helmets. Any purported benefits in the design of the helmets do not outweigh the risk of danger inherent in their defective design.

181. The design defects include, but are not limited to the following:

- a. Negligently failing to design any of their helmet-system's front padding with materials capable of distributing force, though such materials were known to and available to Riddell;
- b. Negligently failing to consistently test helmet systems in non-ambient temperatures, thereby capable of adducing product-performance information;
- c. Negligently failing to design an adequate and comprehensive warning system for their helmets appropriately tailored to the product they manufactured;
- d. Negligently failing to design liner systems in each of the subject helmet systems with a safe means of attenuating and absorbing the foreseeable forces of impact in order to minimize and/or reduce the forces and energy directed to the player's head;
- e. Negligently designing all liner systems within each subject helmet systems with shock attenuating system not safely configured;
- f. Negligently failing to properly and adequately inspect and/or test each helmet model;
- g. Failing to warn Plaintiff that their helmets would not fully protect against the long- term health consequences of concussive and sub-concussive brain injury;
- h. Other acts of negligence and design defect that may be discovered during this litigation.

182. The defective design and unreasonably dangerous condition were a proximate and producing cause of the long-term brain injuries suffered by Plaintiffs and other damages, including but not limited to, economic damages and non-economic damages.

183. At all times, the helmets were being used by Plaintiffs for the purpose for which they were intended.

184. Defendants are strictly liable for designing a defective and unreasonably dangerous product and for failing to warn, which were proximate and producing causes of the injuries and other damages including, but not limited to, economic damage as alleged herein. A safer alternative design was economically and technologically feasible at the time the product left the control of Defendants.

COUNT III - FAILURE TO WARN

185. Plaintiffs adopt and incorporate by reference paragraphs 1-184 of this Complaint as if fully set forth herein.

186. Defendants knew or should have known of the substantial dangers involved in the reasonably foreseeable use of their helmets.

187. Defendants failed to provide necessary and adequate safety and instructional materials and warnings of the risk and means available to reduce and/or minimize the risk of long-term brain injuries while playing football.

188. Defendants failed to provide necessary and adequate information, warnings, and/or instructional materials regarding the fact that other model helmets provided greater shock attenuation from blows to the head area.

189. Defendants ignored years of published literature warning of the dangers of concussive injuries and long-term brain-injuries.

190. Defendants knew that these substantial dangers were not recognizable to an ordinary consumer or user and that such person would use these products without inspection for defects.

191. Plaintiffs neither knew, nor had reason to know of the existence of these defects, or increased risks of harm and used the helmets in a foreseeable manner at all times.

192. The injuries and damages suffered by Adams were the legal and proximate result of the actions of Defendants who owed a duty to warn Plaintiffs of the risks of substantial harm associated with the use of their products.

193. Defendants' failure to warn proximately caused the personal injuries complained of herein.

VII.
DEMAND FOR JURY TRIAL

194. Plaintiffs demand the causes of actions alleged herein be tried before a jury.

VIII.
PRAYER

WHEREFORE, PREMISES CONSIDERED, Plaintiffs pray that Defendants be cited to appear and answer herein, and that upon final hearing or trial, Plaintiffs have the following:

- a. Monetary Judgment against Defendants for a sum within the jurisdictional limits of this Court for all actual damages, both past and future, as indicated above;
- b. Prejudgment interest as provided by law;
- c. Post-judgment interest as provided by law;
- d. Attorney's fees;
- e. Costs of suit; and
- f. Such other and further relief, at law and in equity, to which they may show themselves to be justly entitled.

DATED: May 7, 2018

/s/ Vincent P. Circelli

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Plaintiffs' Long-Form Master Complaint was served in accordance with the federal rules of civil procedure on all counsel of record by electronic service, as well as filed using the Court's CM/ECF system, on the 7th day of May 2018.

/s/ Vincent P. Circelli